
Software Requirements Specification

For

Health Equation

Version 1.0 approved

Prepared by SD013_2021

SLIIT

26/03/2021

Table of Contents

Table of Contents

Table of Contents.....	1
Revision History.....	2
Attribution.....	3
1. Introduction.....	5
1.1 Purpose.....	5
1.2 Document Conventions	5
1.3 Intended Audience and Reading Suggestions.....	5
1.4 Project Scope.....	5
1.5 References	6
2. Overall Description	6
2.1 Product Perspective	6
2.2 Product Features.....	7
2.3 User Classes and Characteristics.....	7
2.4 Operating Environment.....	7
2.5 Design and Implementation Constraints.....	7
2.7 Assumptions and Dependencies	7
3. System Features.....	8
3.1 User Management.....	8
3.2 Online Channeling Management	10
3.3 Online Shopping Management.....	12
3.4 Inventory controlling/Stock management	13
4. External Interface Requirements	18
4.1 User Interfaces.....	18
4.2 Hardware Interfaces.....	31
4.3 Software Interfaces	31
4.4 Communications Interfaces	31
5. Other Nonfunctional Requirements	32
5.1 Performance Requirements.....	32
5.2 Safety Requirements	32
5.3 Security Requirements	32
5.4 Software Quality Attributes	32
Appendix A: Glossary	33
Appendix B: Analysis Models	34
Activity Diagrams.....	34
Use Case Diagram	39

Revision History

Name	Date	Reason For Changes	Version
R.M.H.E.Samarasinghe	3/19/2021	Addition of system diagram.	2
A.A.D.A Ranathunga	3/25/2021	Client requested to do an optional function (Payroll) as a main function.	2

[Click for Meeting Minutes](#)

Attribution

Name	Curtin ID	Contribution
Abrar J.M	20547189	<ul style="list-style-type: none"> • Project Scope (1.5) • Online shopping management (3.3) • User Interfaces (4.1) - Description • User Interfaces (Online shopping management) - 4.1 • Activity diagrams for Online Shopping Management (Appendix B) • Use case diagram for Online Shopping Management part (Appendix B)
A.A.D.A Ranathunga	20547406	<ul style="list-style-type: none"> • Purpose (1.1) • Assumption and dependencies (2.7) • Payroll Management (3.5) • User Interfaces (Payroll management) - 4.1 • Activity diagrams for Payroll Management (Appendix B) • Use case diagram for Payroll Management part (Appendix B)
G.A.S. Fonseka Anne)	20546924	<ul style="list-style-type: none"> • Intended Audience and Reading Suggestions (1.3) • Product Features (2.2) • Stock Management (3.4) • User Interfaces (Inventory management) - 4.1 • Activity diagrams for Stock Management (Appendix B) • Use case diagram for Stock Management part (Appendix B)
G.A.S. Fonseka	20546898	<ul style="list-style-type: none"> • Document Conventions (1.2) • User classes and characteristic (2.3) • Online channeling management (3.4) • User Interfaces (Online channeling) - 4.1 • Activity diagrams for Online Channeling (Appendix B) • Use case diagram for Online Channeling part (Appendix B)

R.M.H.E. Samarasinghe	20588874	<ul style="list-style-type: none">• Product perspective (2.1)• Operating Environment (2.4)• User Management (3.1)• User Interfaces - 4.1 (User management)• Activity diagrams for User Management (B.1)• Use case diagram for User Management part (Appendix B)
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1. Introduction

1.1 Purpose

The purpose of the SRS document is to describe in-depth details of the proposed health system. The system is a web-based system and it is accessible through the internet. The document provides further information about the scope of the system.

1.2 Document Conventions

The contents of the SRS document are bookmarked making it easier to navigate through the pages. The document uses different font sizes for clear identification of the text such as the main topics are numbered and are in bold. The subheadings are given numbers and in bold. The main heading font is bigger than the subheading font. Given below are some of the document conventions.

- Cart = Products are added into cart before check out
- Azure = The cloud database used in the system
- Framework (.net) = To design the web application
- Access-privilege = Defines which user
- Gateway = Is used to make online payment
- User = The person who uses the system

1.3 Intended Audience and Reading Suggestions

The document is a reference guide composed for the client, the supervisor and the development team members.

1.4 Project Scope

The health equation aims to create a system that is user-friendly to the customers and to provide the customers easy access to the services from home. The system will also benefit the Health Equation administration in many different ways. The system will provide a brief introduction to the facilities provided by Health Equation. Through the system, customers can access the E-channeling facility and they can get information about the available treatments from the comfort of their home. The system is divided into multinational regions so that the customers can obtain benefits from the healthcare system throughout various countries and one of its main objectives is to build a good customer relationship through the healthcare system.

1.5 References

- [1] Relevant. "What are the top programming languages used in Web Development". <https://www.cleverism.com/programming-languages-web-development/>

2. Overall Description

2.1 Product Perspective

The company Health Equation currently does not have a web application. The purpose of the web application is to provide its products and services in an easily accessible, convenient way by presenting these facilities on an online platform to the customers. The web application will feature an e- channeling system along with an online store.

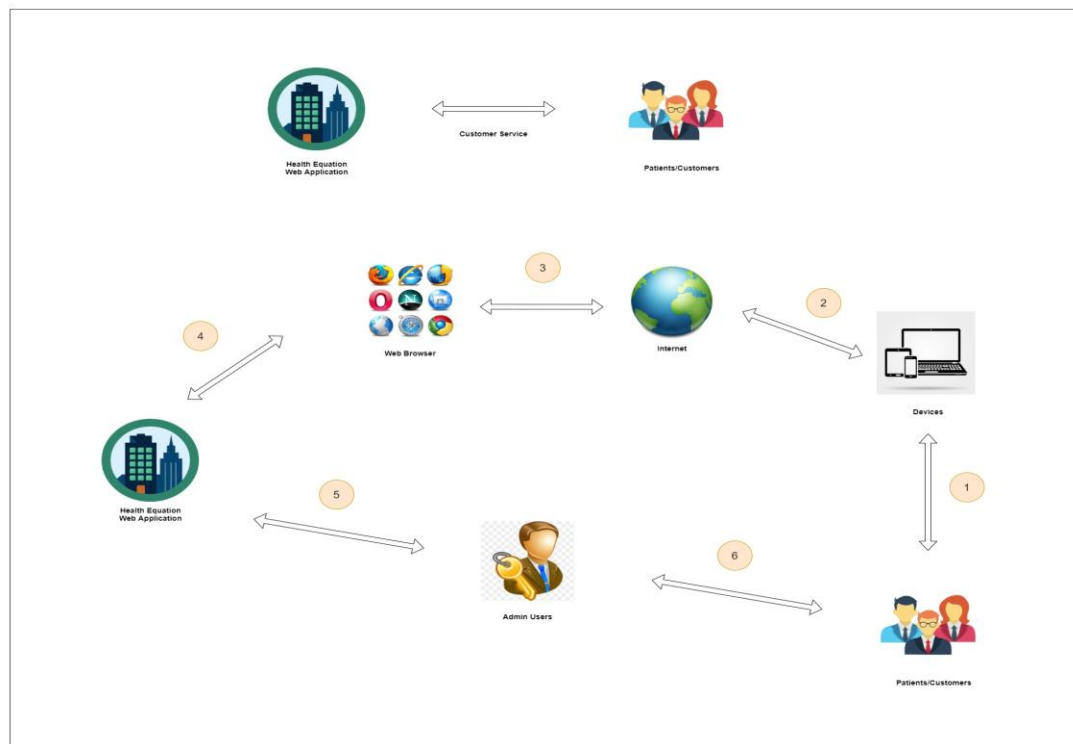


Figure 2.1.1

2.2 Product Features

This project provides many specific features and facilities for both customers and the business. The new customer should register with the system and then provide their respective login credentials to access the E-channeling facility and the online store. The web application provides an online store where customers can purchase necessary drugs and supplements. The registered customers would receive emails when there are product promotions and sales. Customers from multiple regions should be able to log in to the web application, and the system should provide several access privileges to Employees. In addition to that, stock management and generating of reports are done by using the system.

2.3 User Classes and Characteristics

Customers, patients, and administrative staff will utilize the web application. Patients can engage in E-channeling, and customers can purchase items from the store. The employees have more access privileges than the customer, and the administrators or the executives have the highest access privileges to the system. A customer with average knowledge can easily navigate through our system.

2.4 Operating Environment

This web application can be accessed on any environment, be it PC or mobile with an active internet connection. The framework used is .net along with angular and the database is Microsoft Azure.

2.5 Design and Implementation Constraints

As the project is, still in its initial documentation stage design and implementation constraints are not present.

2.7 Assumptions and Dependencies

According to this project, the shopping gateway is assumed a third-party gateway API, and there are several APIs such as notification APIs and language translator APIs that will be used in the system as third-party software tools. Furthermore, we assume that customers use an online environment (Internet connection) to access the system. The use of credit or debit card in this process is an additional advantage to do transactions more smoothly.

3. System Features

3.1 User Management

3.1.1 Description and Priority

The User profile management function helps in managing customers and employees who have access to the web application. Access rights are divided into two categories, registered and unregistered users (employees, customers). Unregistered users can access the home page and the available items for sale; however, to proceed with a payment, the user has to register themselves in the web application using the provided registration form. If the user has already registered themselves in the system, the given login form can be used to login into the system. The admin is also tasked with the responsibility of adding new employees to the system. Employees must use the same login form used by the customers to login to their respective employee profile page.

3.1.2 Stimulus/Response Sequences

Sequence No	Pre-condition	Stimulus	Response
1.1	None	User accesses system	System displays the Home Page screen
1.2	Unregistered Customer	Customer wants to register	System requests for necessary details (Name, Email, number etc.) and walkthroughs, the entire registration process
1.3	Registered Customer	Customer logs in to the system	System provides full access to the customer
1.4	Unregistered Employee	Admin adds the employee to the system	System creates an employee profile

1.5	Registered Employee	Employee logs in to the system	System displays the employee profile
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Table 3.1.2.1

3.1.3 Functional Requirements

Requirement ID	Requirement Name	Description
1.1	Signup	This allows unregistered users to register themselves in the system.
1.2	Login	This allows registered customers/employees to login to the system.
1.3	Guest Login	This allows unregistered users to surf the web application / view the inventory items but is unable to proceed with payments until they are registered.
1.4	Forgot Password	This sends a link to the user's email that allows the user to reset their password.

Table 3.1.2.1

3.2 Online Channeling Management

3.2.1 Description and Priority

This feature is required for patients who need to consult a doctor. According to this feature, a patient can register through a registration form, and once the user register, they can reserve a date and time and make an appointment to consult a doctor. The system should be able to display the available doctors and their time slots. After the user makes an appointment, the user can communicate with a customer representative through a communication medium and it records patient details and, history in the system. This feature is a high priority according to the system.

3.2.2 Stimulus/Response Sequences

Sequence_ No	Pre- Conditions	Stimulus	Response
1.1	A patient must register in the main system.	User access the online changeling platform	A registration form should display to the patient.
1.2	None	Patient wants to register in to the system	A full registration form will display and ask the patients symptoms and additional history details.
1.3	Registering the online Form.	Patient want to make an appointment.	The system should provide the allocated date and time for doctors in the system and system should provide the other necessary information to the patients.

1.4	Registering the online Form.	Patient need to communicate through a communication mode.	After allocating the date and time, the patient can communicate through a communication, channel and system should facilitate a communication medium to the patient.
1.5	Registering the online Form.	Patient need to refer his profile details.	The system should provide the patient profile and his appointment details to confirm his appointment.

Table 3.2.2.1

3.2.3 Functional Requirements

Requirement _ID	Requirement _Name	Description.
1.1	Registration	The system should obtain the information of the patients and the details of patients.
1.2	Take an appointment	The system should allocate the date and time for booking or to make appointments.
1.3	Communication medium	After taking an appointment, the system should provide an interface to communicate between doctor and the patient.
1.4	Provide patient details.	The system should provide the details of the patients and the details of the appointment to confirm the appointment process.

Table 3.2.3.1

3.3 Online Shopping Management

3.3.1 Description and Priority

The online shopping feature provides various natural (Herbal) medical products, which are made available for its customer to purchase. However, adding the online shopping feature to the system makes it more convenient for the user to purchase products. The online shopping cart only focuses on providing health-related medicines and supplements. The customer can pay through a Debit card/ Credit card by providing the relevant credentials. Further, the payment is handled through a payment gateway that ensures safety and security when a customer makes a transaction. The online shopping feature would benefit customers to purchase the product and get it delivered to their residence. It would help many patients, as some patients will be finding it difficult to travel to purchase medicines. Only the Registered customers can proceed with payment. Un-Registered customers can view the product, but they are not allowed to proceed with the payment. Registered customers can add multiple products to the cart and proceed to checkout when the purchase is made.

3.3.2 Stimulus/Response Sequences

Sequence No	Pre-condition	Stimulus	Response
1.1	None	User access the system	System will display the Homepage
1.2	Unregistered User	User access the system	User can go through the product details and price
1.3	Unregistered User	User access the system	Unregistered customer will be asked to register or login
1.4	Registered User	User logs into the system	Customers can purchase the product.
1.5	Registered User	User purchases products	The customer can add multiple products to cart

1.6	Registered User	User payment for the purchase	The customer should mention the address and other details. The customer should pay through credit or debit card.
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Table 3.3.2.1

3.3.3 Functional Requirements

Requirement ID	Description
1.1	The system should send an email to the customer after the purchase as a receipt.
1.2	The system will be sending promotional alerts to the email of the registered customer.
1.3	The system should validate transactions with the credit card.
1.4	The system should only allow Registered customers purchase the product.
1.5	The system should generate report on sales.

Table 3.3.3.1

3.4 Inventory controlling/Stock management

3.4.1 Description and Priority

Administrators of the health equation company can manage the stock management system. Mainly, products that are received to the stock, products which are marketed and returned, are handled by the stock management. As this is a web application, the top-level administrators can view the stock by staying in remote locations, which will be a great privilege for decision-making. Further to that, Top-level management/administrators can analyze and generate comparisons of the product sales. Moreover, any authorized employee (administrators or top-level management) can check the quantity availability and history of the records of particular items (transactions of relevant products).

3.4.2 Stimulus/Response Sequences

After the administrator successfully login into the system he/she is able to create the item code for a particular product and generate the opening balances. Once respective parties interest a product to the stock they are able to market/ sell the products, after they start the transactions the system will provide monthly transaction reports/day end transaction reports to the administrators (or top-level management). This report should include the sales details of the products, return details of the products after purchasing and receiving details of the products to the stock. In the same time, administrators are able to obtain summarized details about Good Received Notes (GRN), Good Return Notes, and Good Delivery Note (GDN) and purchase orders notes. When the quantity approaches the reorder level, the system sends alerts (e-mails) to authorized parties. In addition to that, it sends alerts (e-mails) to administrators regarding the slow moving items.

Sequence No	Pre-Condition	Stimulus	Response
1.1	Should be an authorized employee(administrator)	Administrators add items.	System displays the required details.
1.2	-	Administrator Input opening balances.	The system commences the transaction processes of stock management.
1.3	-	Administrator/ top-level management require transaction reports.	The system displays required transaction reports to the administrator/ top-level management.

1.4	-	Administrator/ top level management requires summarized details about Good Received Notes, Good Return Notes after purchasing, Good delivery Notes and purchase order notes.	System display summarized details of Good Received Notes, Good Return Notes after purchasing, Good delivery Notes and purchase order notes.
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Table 3.4.2.1

3.4.3 Functional Requirements

Requirement No	Description
1.1	The system should send alerts to the respective administrators when quantity approach to the reorder level.
1.2	The system should send alerts to the respective administrators when there are slow moving items.
1.3	The system should validate user inputs
1.4	The system should generate monthly/daily reports.
1.5	The system should generate transaction summaries

Table 3.4.3.1

3.5 Payroll System

3.5.1 Description and Priority

The Payroll management function of the web application is of high priority as it handles all payments made to the employees as well as their attendance information. The employees can utilize this system to get information regarding their salary the system also allows the admins to make necessary changes to the employee's salary information with little to no effort.

3.5.2 Stimulus/Response Sequences

Sequence No	Pre-condition	Stimulus	Response
1.1	Registered employee	Employees navigate to their respective profile and click on the salary button	System provides the salary slip which can also be printed out.
1.2	Registered employee	Employees navigate to their respective profile and clock in their time of arrival	System stores the arrival time in the payroll system and displays "Your arrival time has been clocked in"
1.3	Registered employee	Employees navigate to their respective profile and clock in their time of departure	System stores the departure time in the payroll system and displays "Your time of departure has been clocked in"
1.4	Unregistered Payroll admin	Admin registers the Payroll admin	System requests the necessary details from the admin.

1.5	Registered Payroll admin	Access the Payroll system	System displays the current state of the payroll system
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Figure 3.5.2.1

3.5.2 Functional Requirements

Requirement ID	Requirement Name	Description
1.1	Clock in/ Clock out	This allows the employees to clock in and clock out their time of arrival and departure. This information is also used to check if employees are on time or not
1.2	Set Salary	Set the salary in the payroll system according to the employee's positions.
1.3	Set Schedule	This allows the admin to create various time schedules for different employees.
1.4	Statistics	Displays a graphical representation in the form of a graph, the attendance of the employees.
1.5	Payroll	Calculates the net salary considering various factors such as deductions, cash advances etc.

Figure 3.5.2.1

4. External Interface Requirements

4.1 User Interfaces

The user interfaces of the web application are designed in a very simple, attractive easy to use manner. Because the user interfaces are extremely user friendly, navigating through the website and using it is a simple task to any user.

User Management

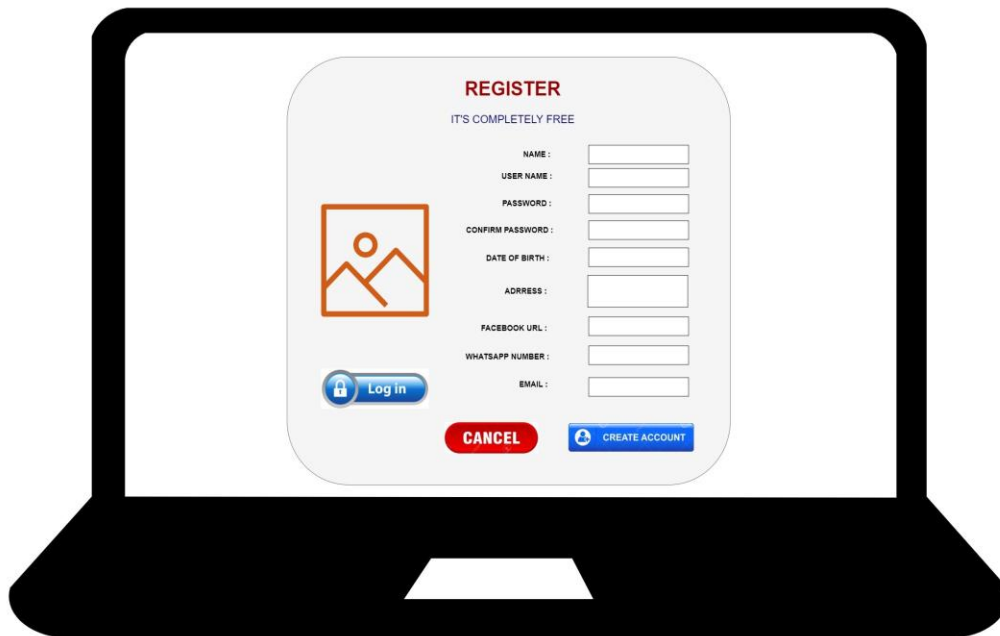


Figure 4.1.1

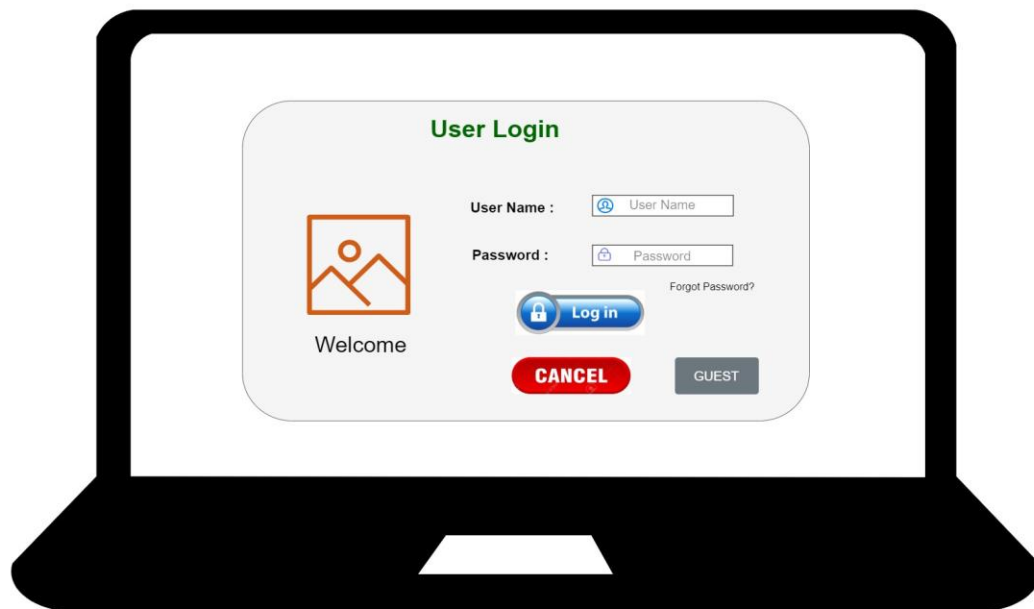


Figure 4.1.2

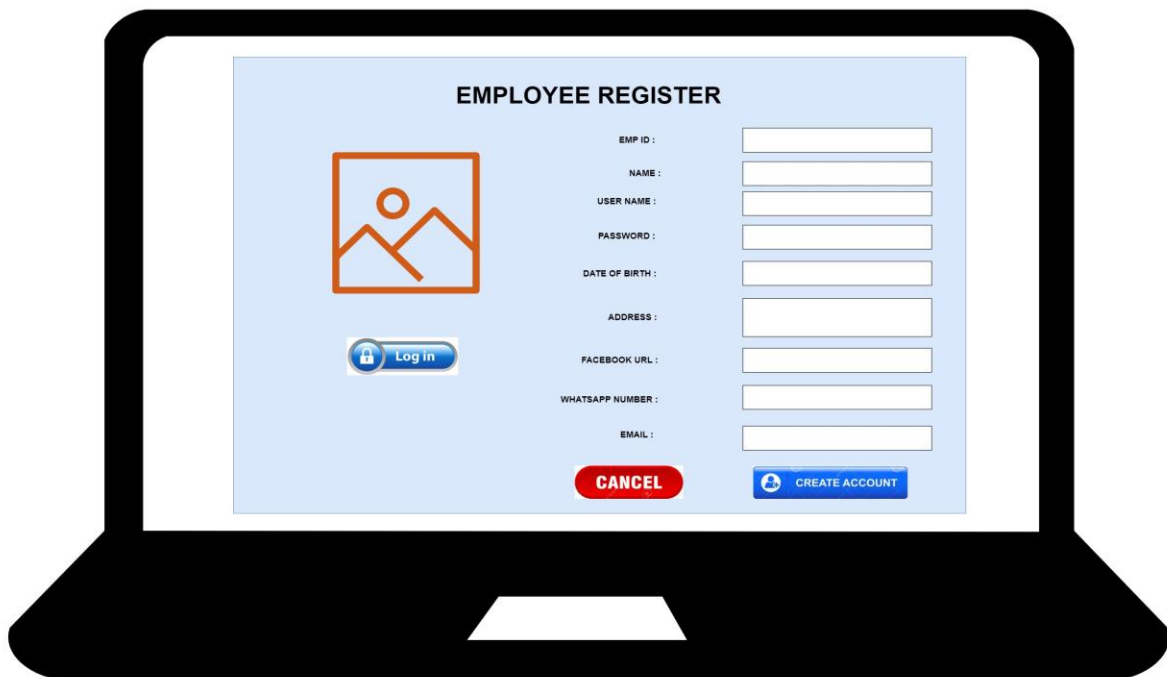


Figure 4.1.3

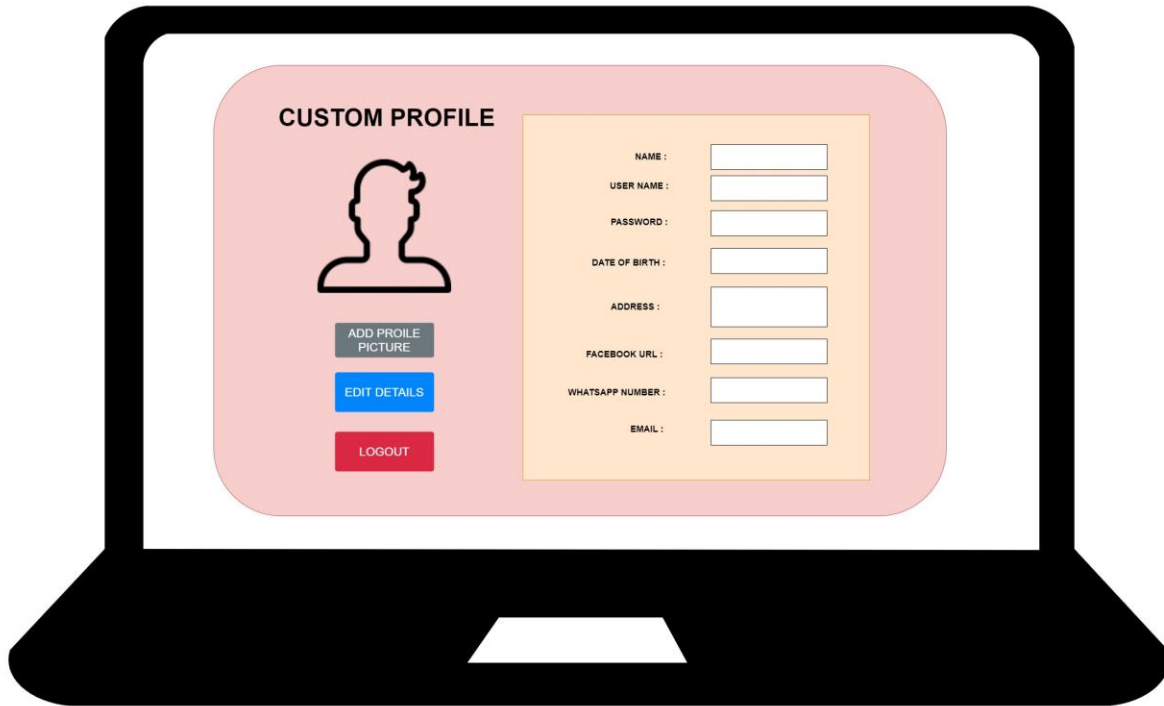


Figure 4.1.4



Figure 4.1.5

Online Channeling Management

The screenshot shows a web application titled "Health Equation" with a navigation bar containing "Home", "User_profile", and "Contact_us", and a search bar. The main content area is titled "User Profile and Appointment details" and contains a user profile icon, a "Name" field, an "Age" field with a value of 100, an "Address" field, a "Symptoms" field, a "Time" field with a value of 100, and a "Patient History" section with three empty fields. A calendar for October 2014 is displayed on the right, with the 24th highlighted. "SUBMIT" and "Close" buttons are at the bottom.

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Figure 4.1.6

The screenshot shows a web application titled "Health Equation" with a navigation bar containing "Home", "User_profile", and "Contact_us", and a search bar. The main content area is titled "Registration Form" and contains a "Name" field, an "Address" field, a "Select the doctor" dropdown menu, a "Contact_details" field, a "Gender" section with "Male" and "Female" radio buttons, and a "Symptoms" field. "SUBMIT" and "Close" buttons are at the bottom.

Figure 4.1.7

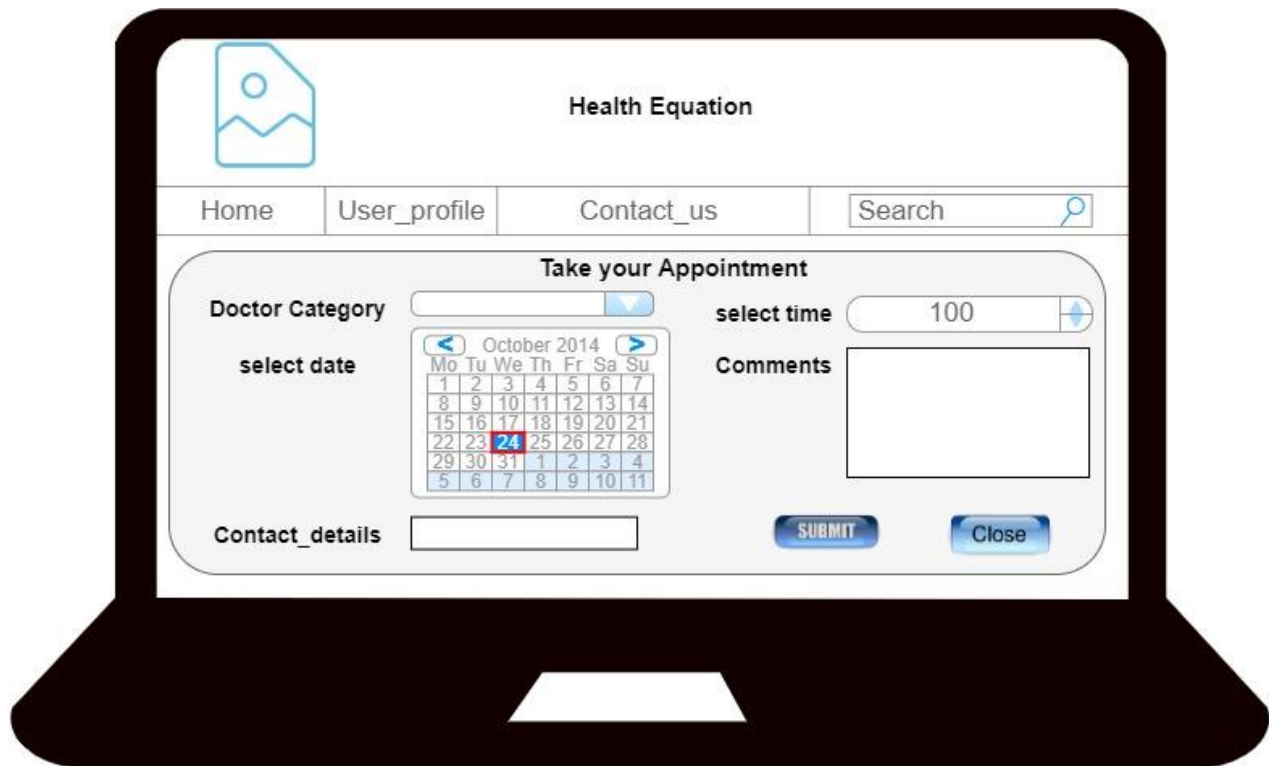


Figure 1.1.8

Online Shopping Management

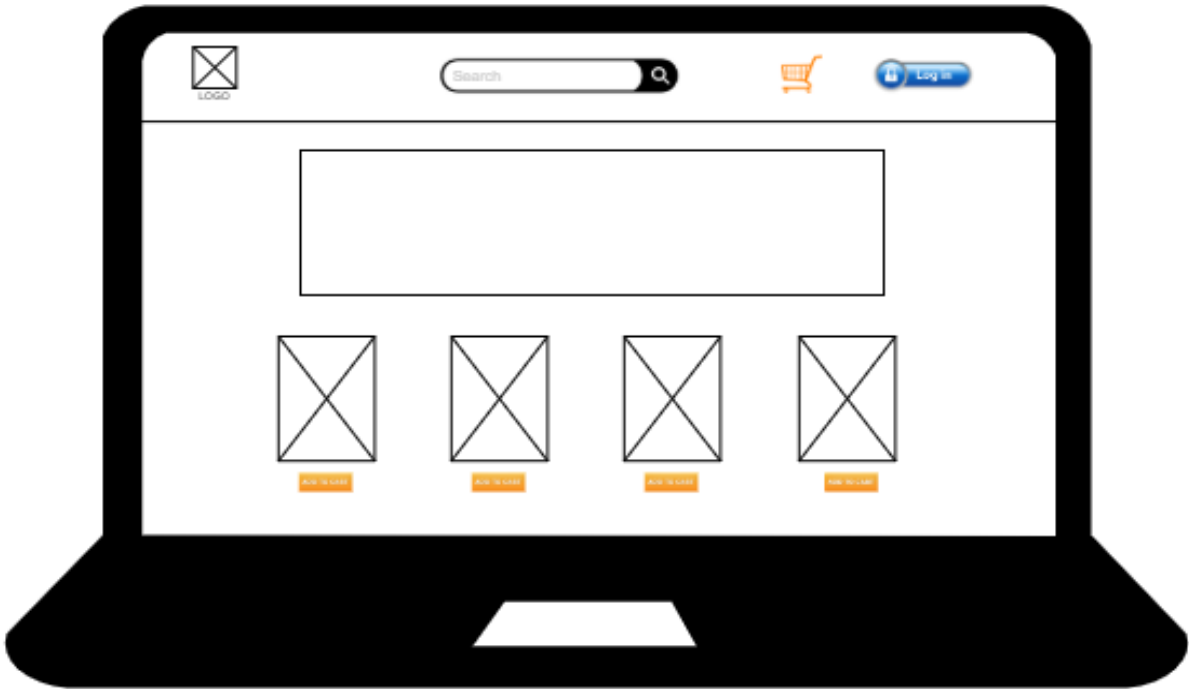


Figure 4.1.9

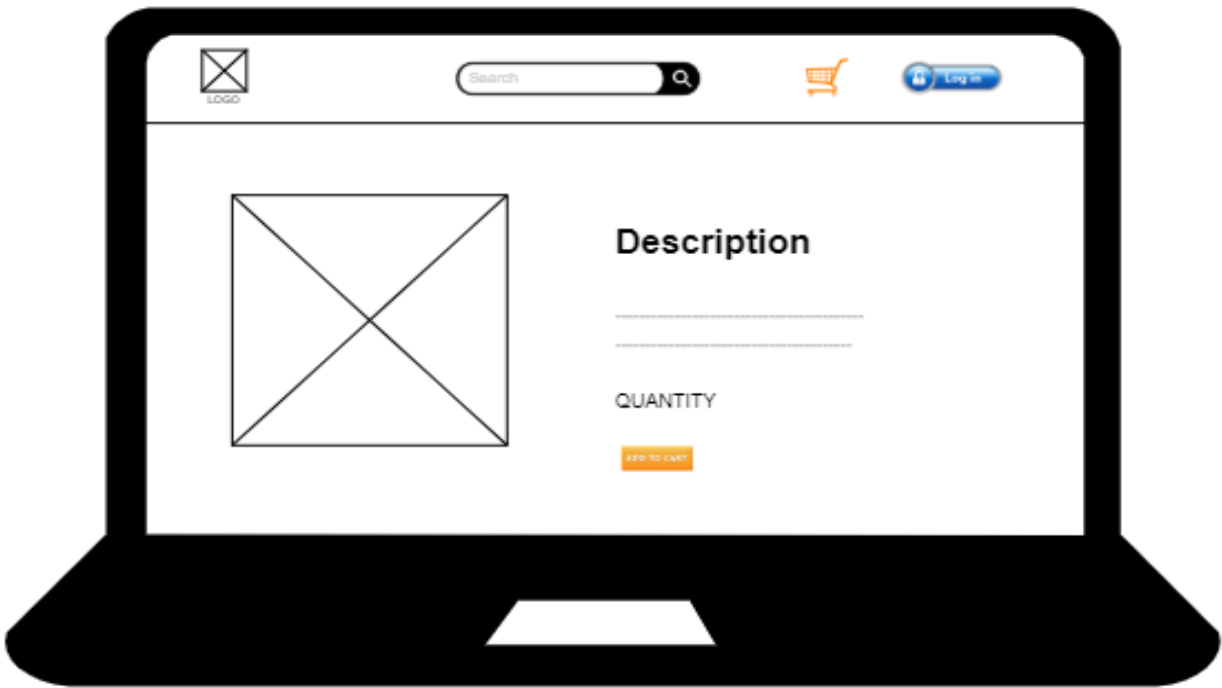


Figure 4.1.10



Figure 4.1.11



Figure 4.1.12

Inventory Management

Insert_Product_sale_transaction

Item_Code

Item_Category

transaction_type

Unit_price

Quantity

100

Grand_total

100

Date

<

October 2014

>

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Submit

Update

Delete

Figure 4.1.13

Generate_transaction_report

Report_Number

Report_category

Report_title

Time

100

Text

Signature

Date

<

October 2014

>

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Submit

Figure 4.1.14



Figure 2.1.15

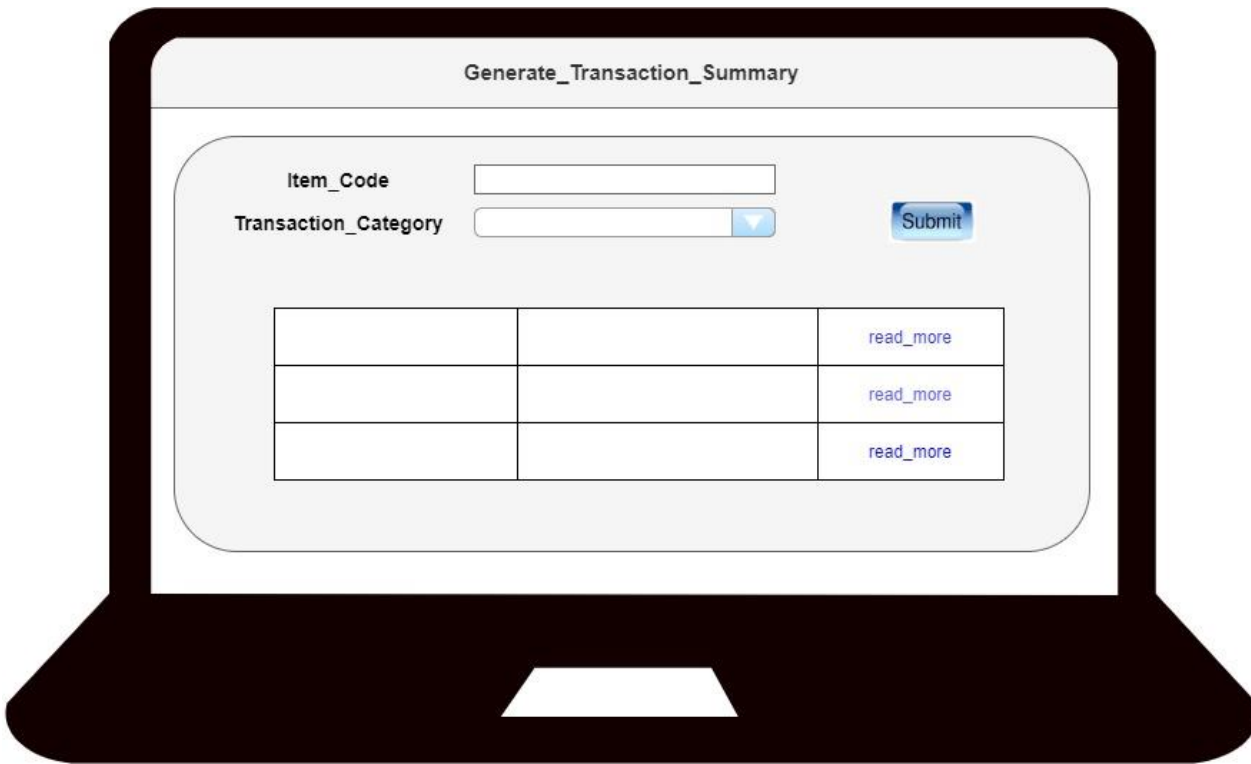


Figure 4.1.16

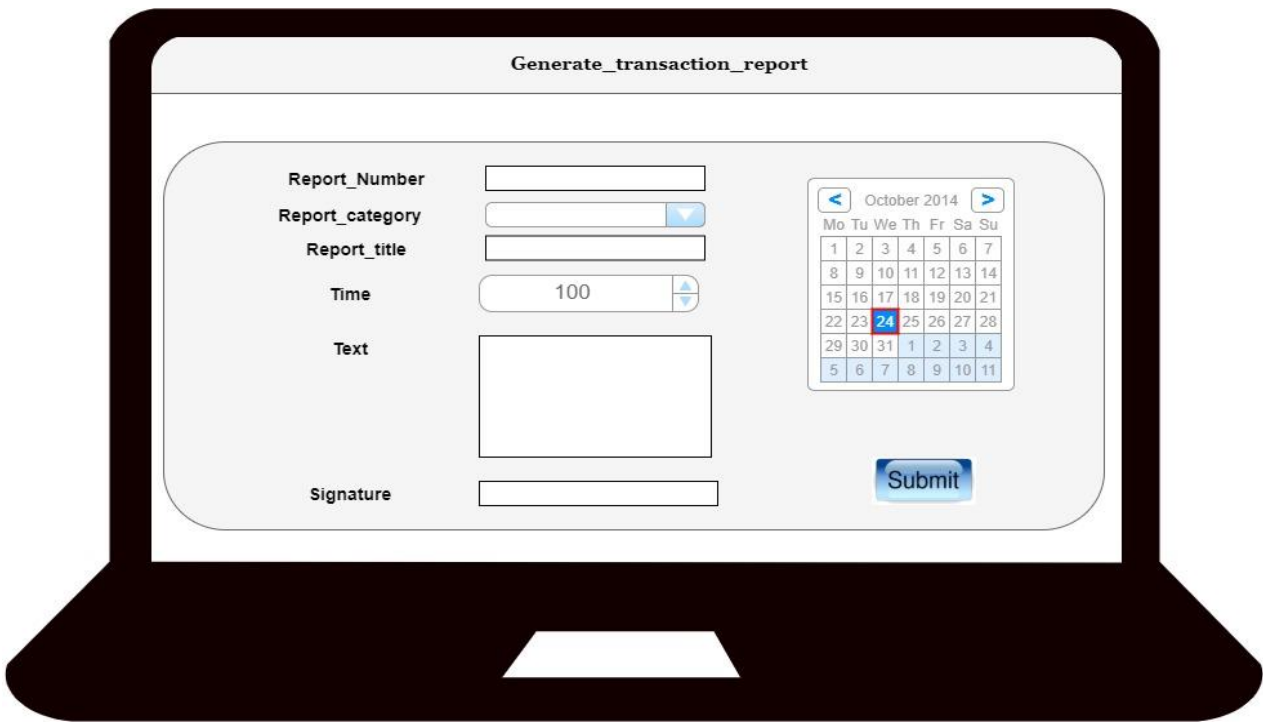


Figure 4.1.17

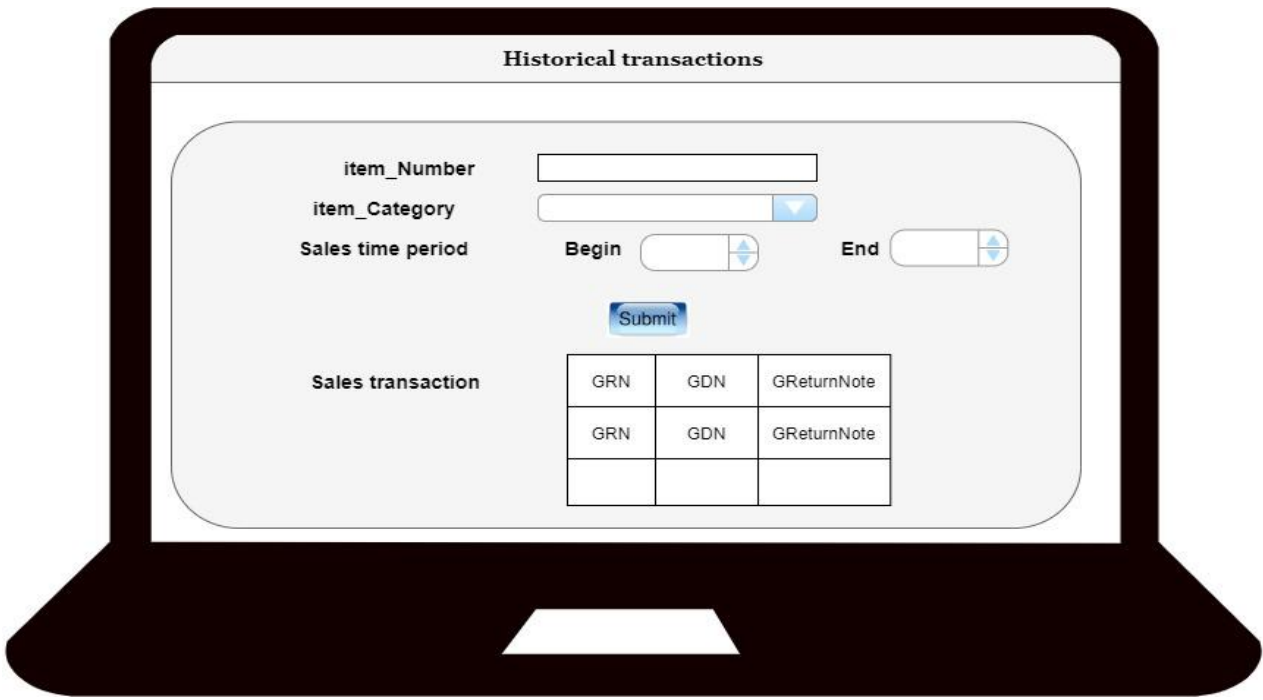


Figure 4.1.18

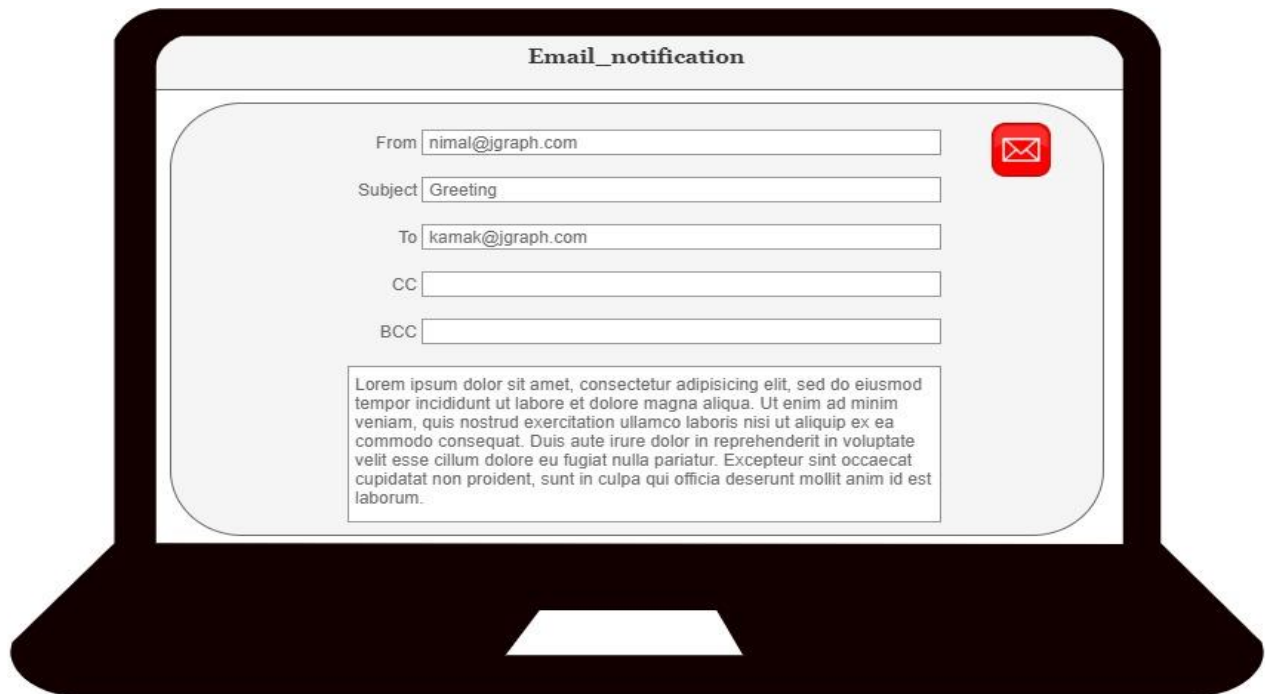


Figure 4.1.19

Payroll Management



Figure 4.1.20



Figure 3.1.21

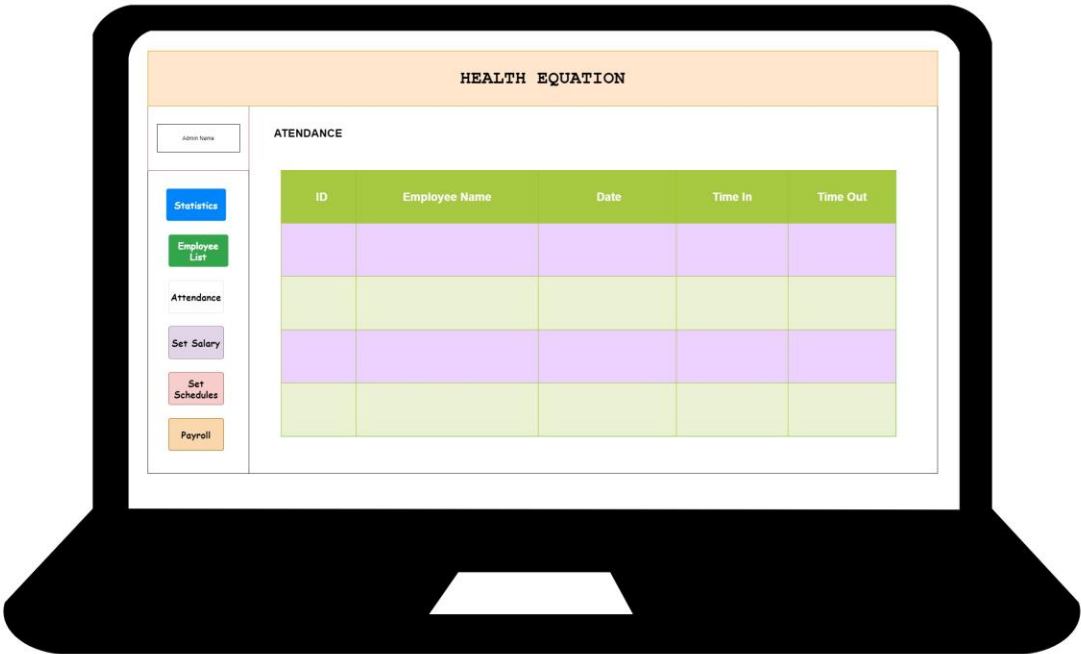


Figure 4.1.22

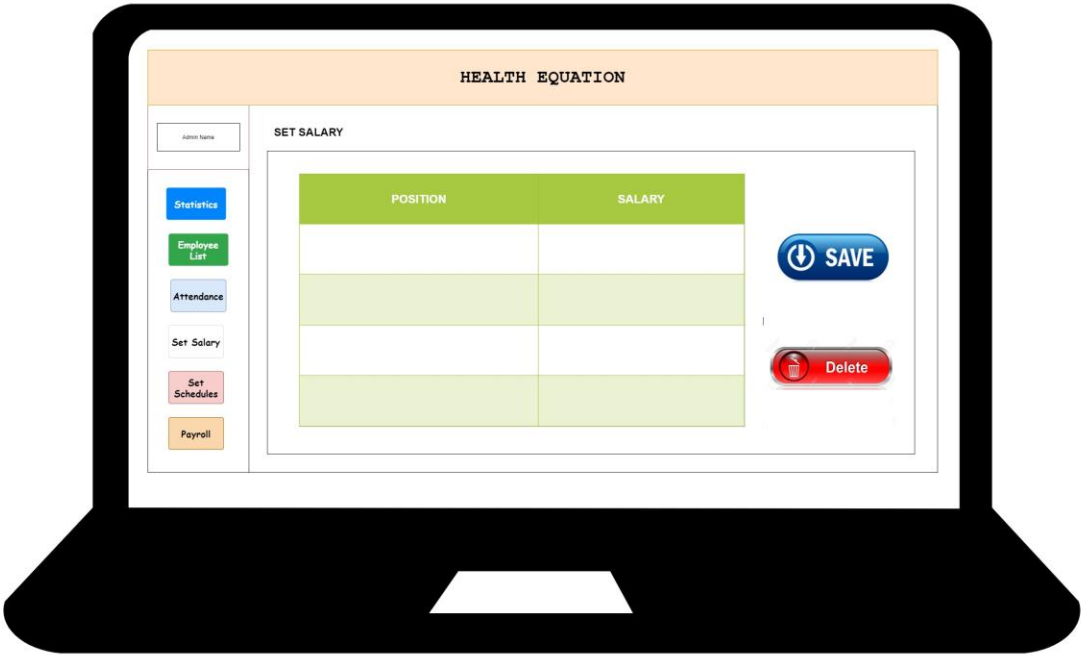


Figure 4.1.23

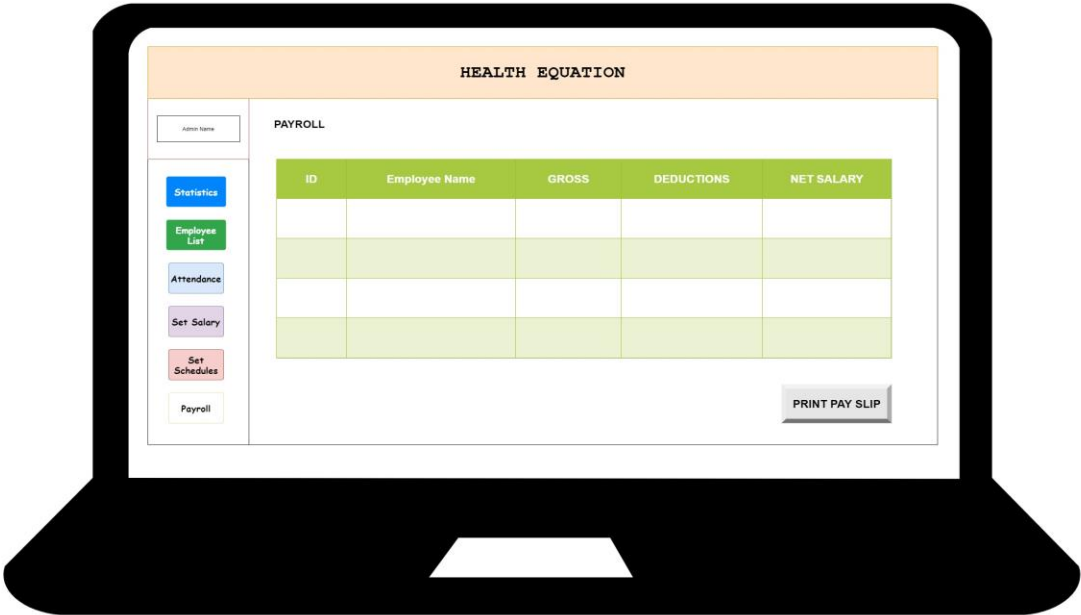


Figure 4.1.24

4.2 Hardware Interfaces

As the system is a web application, the system does not rely heavily on hardware. The web application is compatible with any operating system with an active internet connection.

4.3 Software Interfaces

The database that is planned to be used is Microsoft Azure. Further As the system is in the requirement analysis state the software specification are in discuss with the members and there is an ongoing research for it. As per the client's requests, to notify customer about offers and promotions a marketing cloud has to be used. To process payments a payment gateway has to be used. To send text messages to the customers a service provider gateway has to be used.

As the project is not at its implementation stage, the above-mentioned tools and APIs can change.

4.4 Communications Interfaces

The customer must have an internet connection and web browser to access the website. The website utilizes communication mediums such as WhatsApp, Email and Facebook Messenger to notify and stay in contact with the customers. Sensitive customer details are protected from cyber threats to ensure the privacy and the security of the customer.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The proposed system according to the client's requirements has to have excellent performance statistics. The web application should have good response time. The website should also be able to handle the workload it will receive.

5.2 Safety Requirements

A backup database will be available with copies of all the data in the primary database in case its affected by unknown entities such as viruses and cause information to be lost.

5.3 Security Requirements

For safety requirements, system databases will be developed in a cloud environment, which has higher security than normal databases, and techniques such as sql injections will be planned to be used in our system in the implementation phase. There are several access privilege modes in our system that users and admin can separately use. So that there is a certain amount of protection to the databases which are coming from the outside attackers.

5.4 Software Quality Attributes

The web application adapts to many regions and their languages which makes users from their respective countries to use this system conveniently.

Appendix A: Glossary

- UI = User Interface
- API = Application programming interface

Appendix B: Analysis Models

Activity Diagrams

- User Management

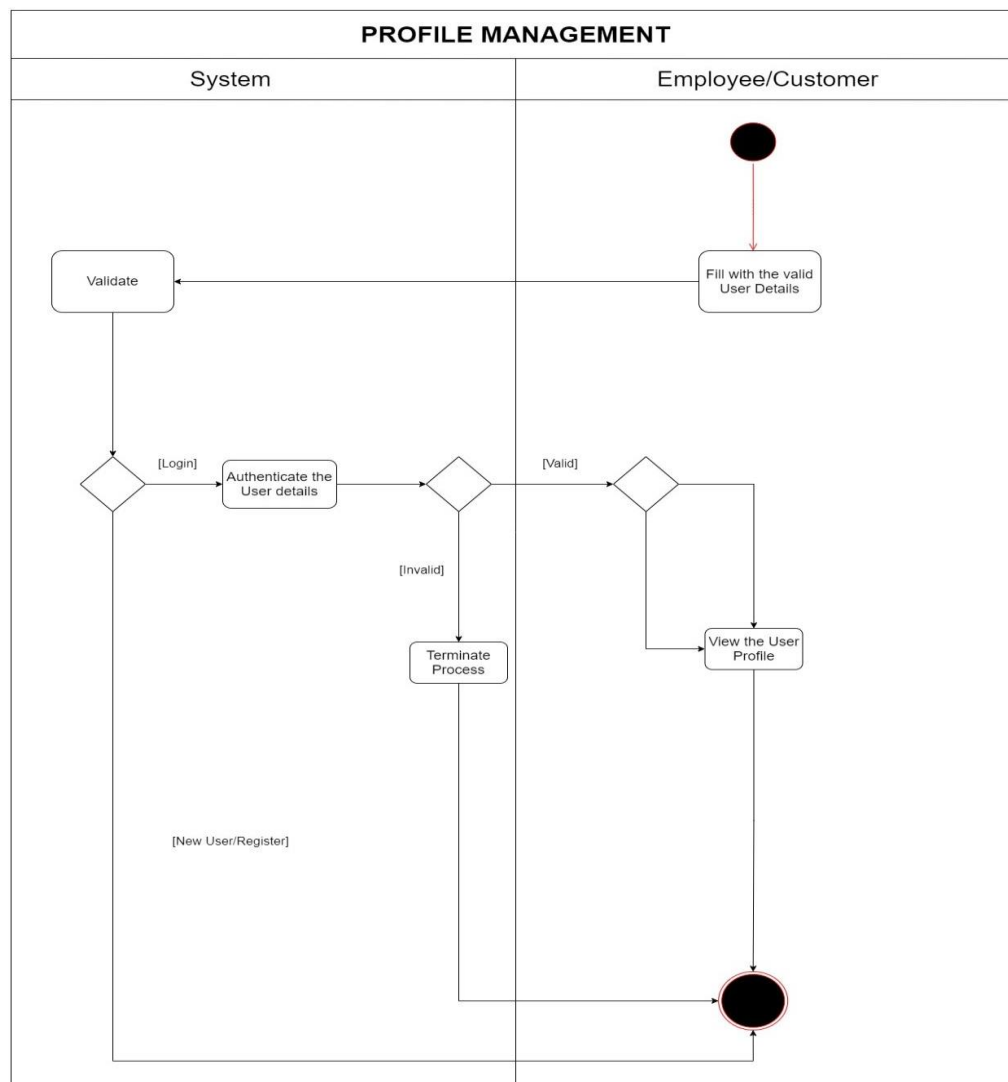


Figure B.1

- Online Channeling

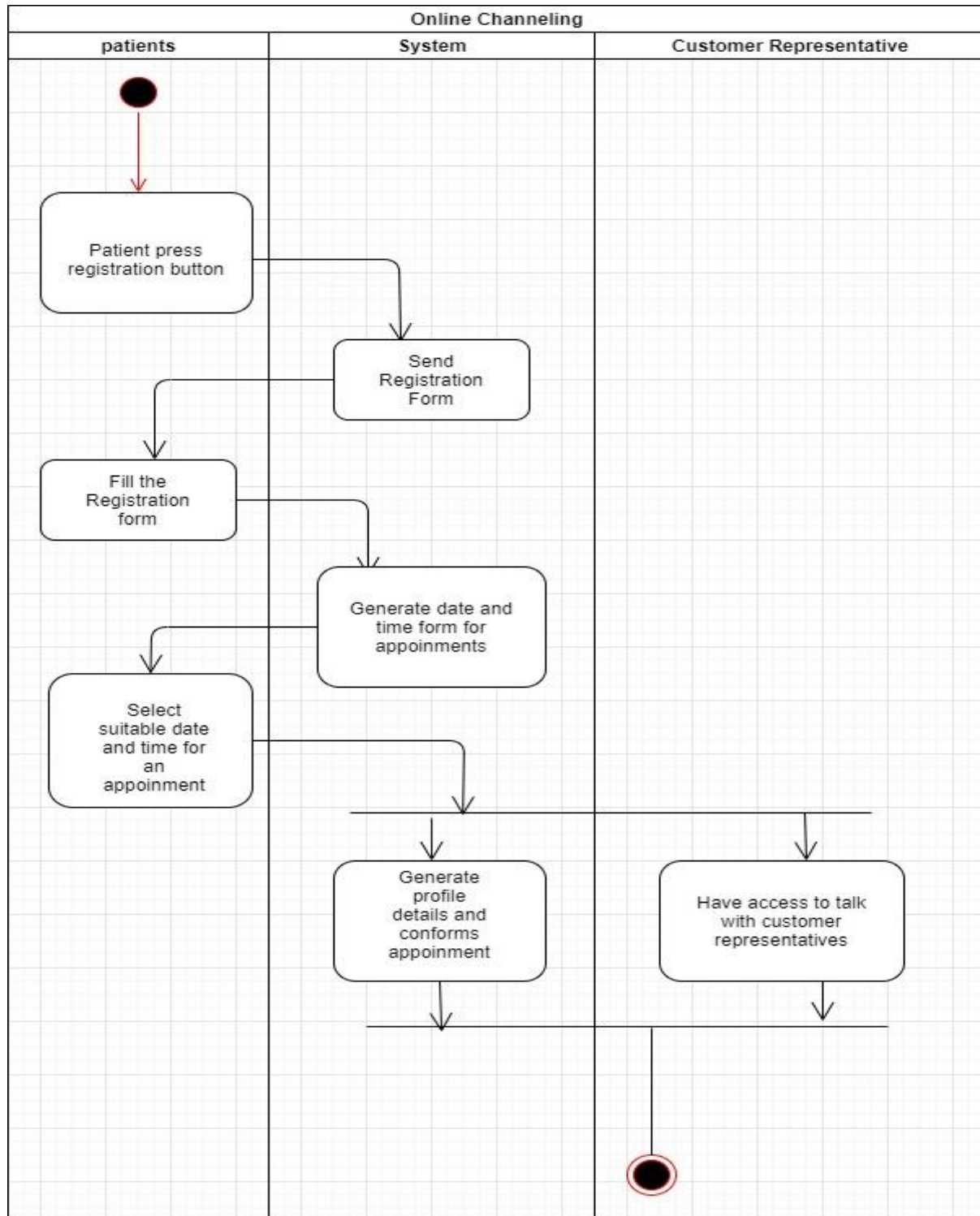


Figure B.2

- **Stock Management**

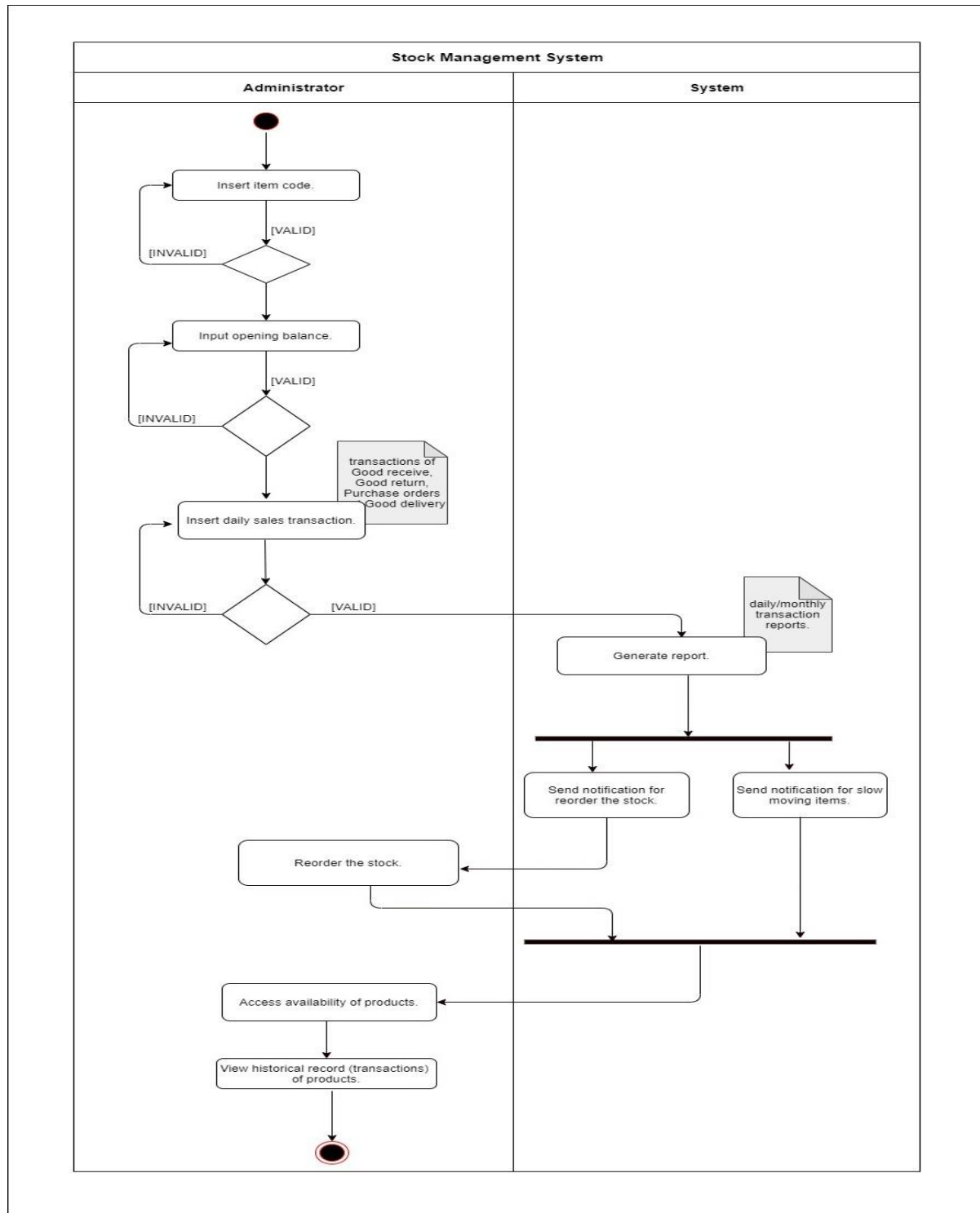


Figure B.3

- Online Shopping Management

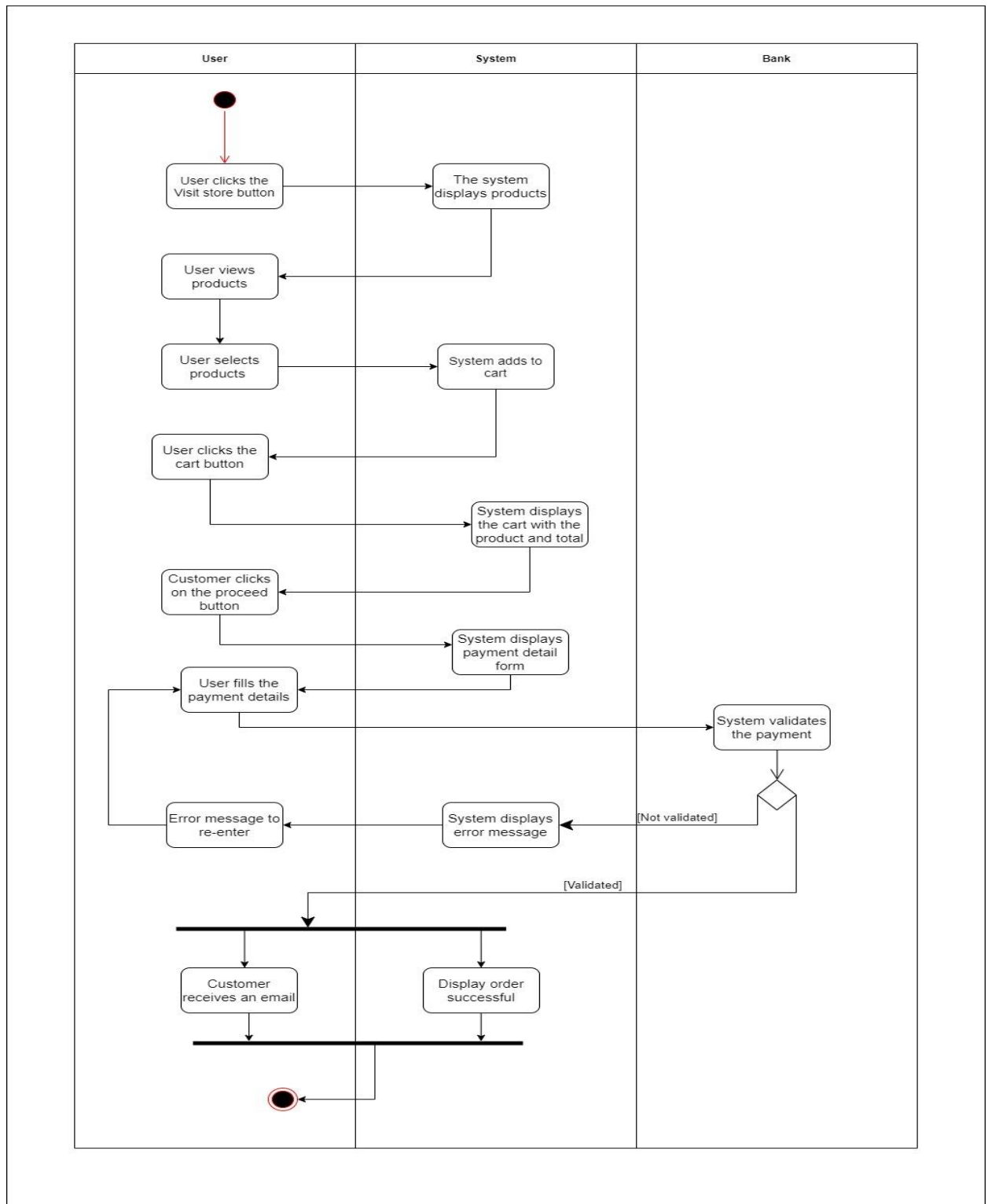


Figure B.4

- Payroll Management

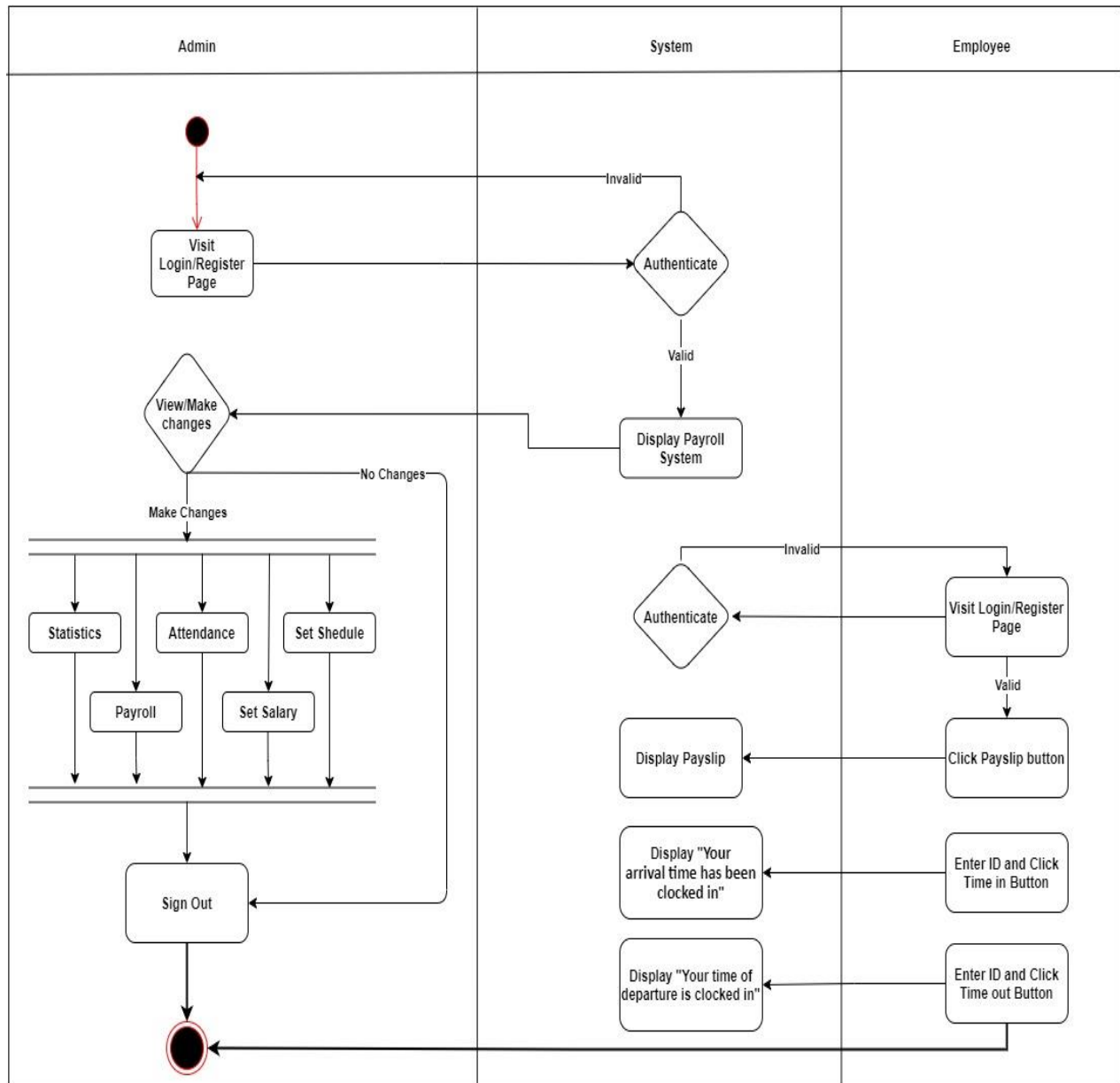
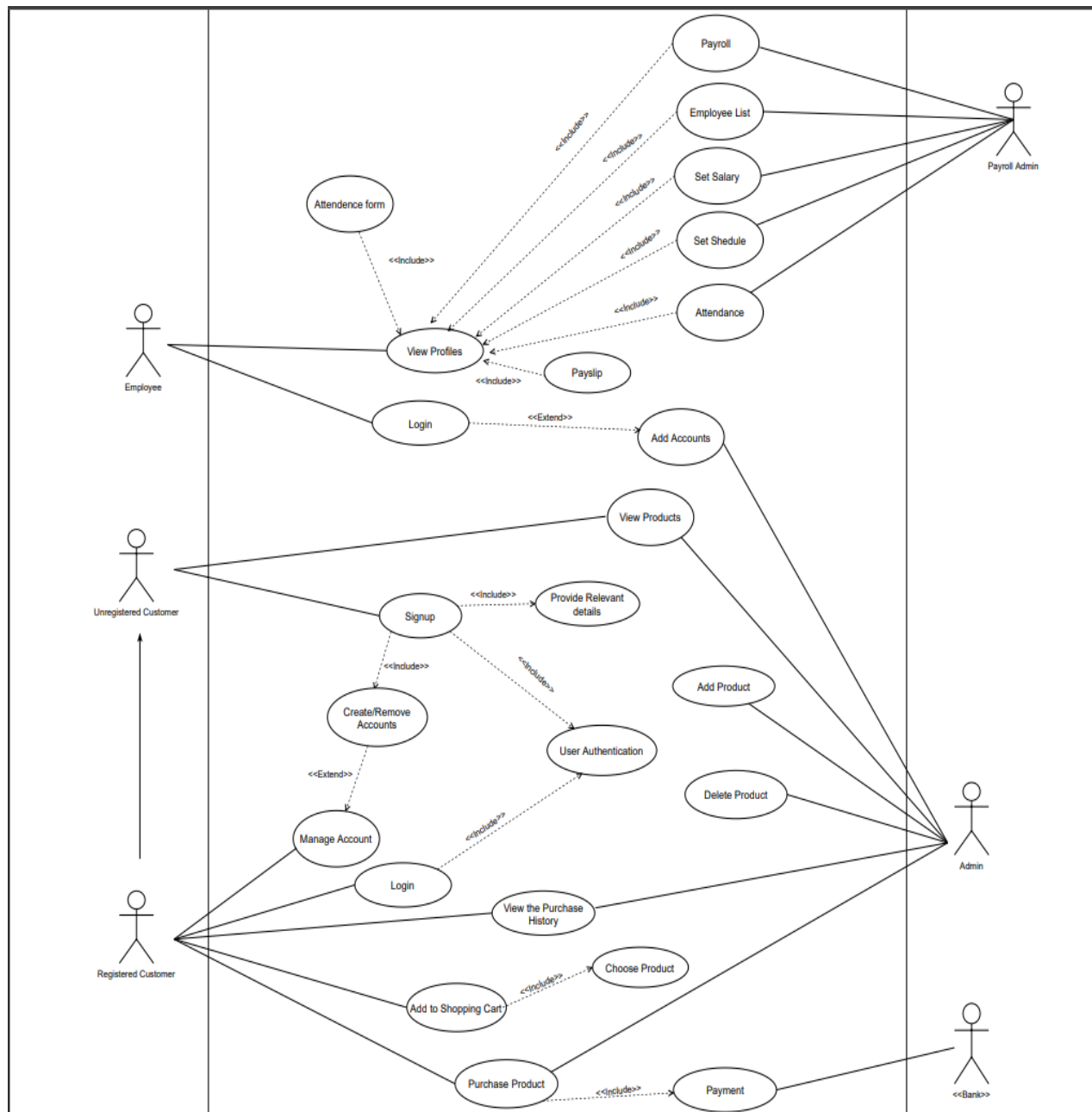


Figure B.5

Use Case Diagram



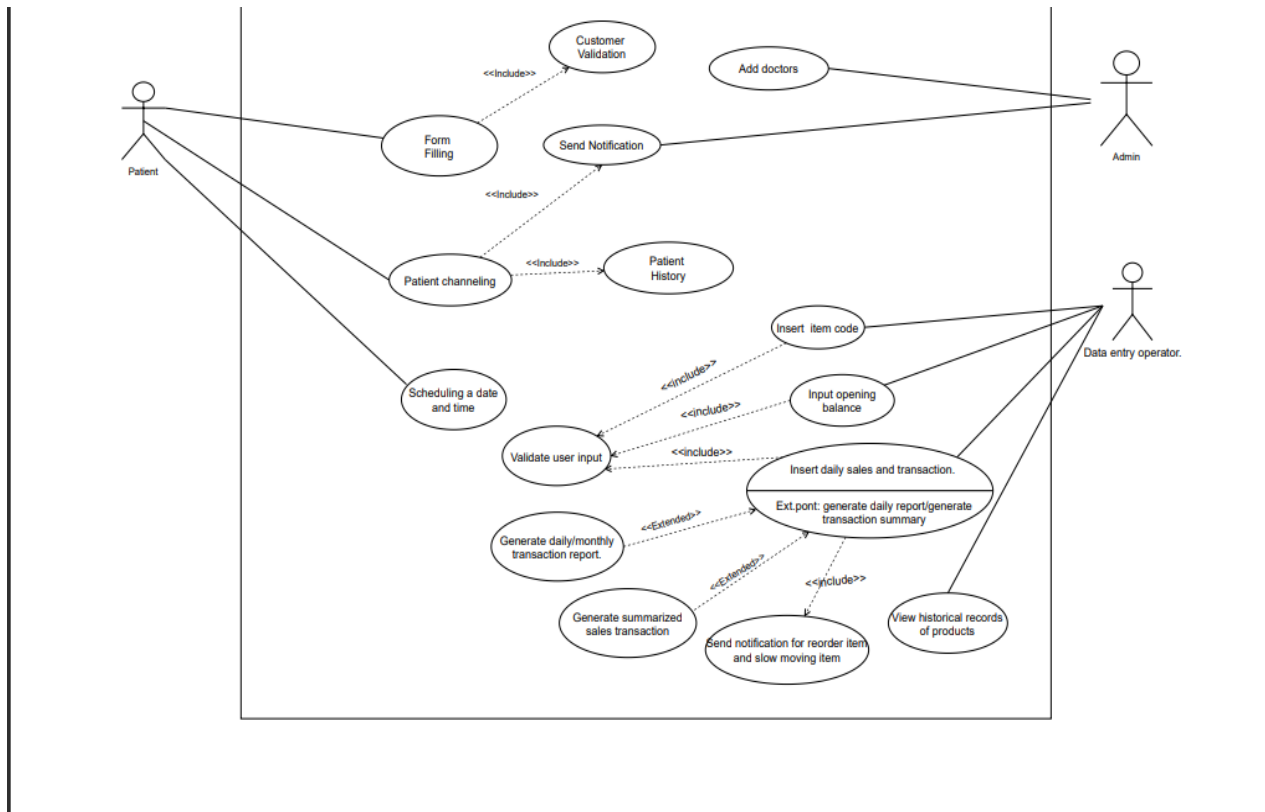


Figure B.6